

Serial Number:

08 8980E

Processing Date: 9/3/02

1644

Edited by:

Verified by:

DC

(STIC staff)

 Changed a file from non-ASCII to ASCII Changed the margins in cases where the sequence text was "wrapped" down to the next line Edited a format error in the Current Application Data section, specifically:**ENTERED** Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____. Added the mandatory heading and subheadings for "Current Application Data". Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer. Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.**RECEIVED** Inserted colons after headings/subheadings. Headings edited included:

SEP 18 2002

 Deleted extra, invalid, headings used by an applicant, specifically:

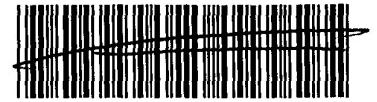
TECH CENTER 1600/2900

 Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____. Inserted mandatory headings, specifically: Corrected an obvious error in the response, specifically: Edited identifiers where upper case is used but lower case is required, or vice versa. Corrected an error in the Number of Sequences field, specifically: A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: Other:

Re-aligned amino numbering in Segs. 107 + 109

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95



1600

RAW SEQUENCE LISTING DATE: 09/13/2002
 PATENT APPLICATION: US/08/823,980E TIME: 13:11:37

Input Set : N:\Crf4\09112002\H823980E.DC.txt
 Output Set: N:\CRF4\09132002\H823980E.raw

SEQUENCE LISTING

- 1 (1) GENERAL INFORMATION:
 - 2 (i) APPLICANT: Weiner, Amy J.
Houghton, Michael
 - 3 (ii) TITLE OF INVENTION: Conserved Motif of Hepatitis C Virus
E2/NS1 Region
 - 4 (iii) NUMBER OF SEQUENCES: 135
 - 5 (iv) CORRESPONDENCE ADDRESS:
 - 6 (A) ADDRESSEE: Chiron Corporation
 - 7 (B) STREET: 4560 Horton Street
 - 8 (C) CITY: Emeryville
 - 9 (D) STATE: CA
 - 10 (E) COUNTRY: USA
 - 11 (F) ZIP: 94608-2916
 - 12 (v) COMPUTER READABLE FORM:
 - 13 (A) MEDIUM TYPE: Floppy disk
 - 14 (B) COMPUTER: IBM PC compatible
 - 15 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - 16 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
 - 17 (vi) CURRENT APPLICATION DATA:
 - 18 (A) APPLICATION NUMBER: US/08/823,980E
 - 19 (B) FILING DATE: 25-Mar-1997
 - 20 (C) CLASSIFICATION:
 - 21 (viii) ATTORNEY/AGENT INFORMATION:
 - 22 (A) NAME: Robins, Roberta L.
 - 23 (B) REGISTRATION NUMBER: 41,411
 - 24 (C) REFERENCE/DOCKET NUMBER: CHIR-0108
 - 25 (ix) TELECOMMUNICATION INFORMATION:
 - 26 (A) TELEPHONE: 650-325-7812
 - 27 (B) TELEFAX: 650-325-7823
 - 28 (2) INFORMATION FOR SEQ ID NO: 1:
 - 29 (i) SEQUENCE CHARACTERISTICS:
 - 30 (A) LENGTH: 6 amino acids
 - 31 (B) TYPE: amino acid
 - 32 (C) STRANDEDNESS: single
 - 33 (D) TOPOLOGY: linear
 - 34 (ii) MOLECULE TYPE: peptide
 - 35 (ix) FEATURE:
 - 36 (A) NAME/KEY: Xaa
 - 37 (B) LOCATION: 1
 - 38 (D) OTHER INFORMATION: /label= variable
 - 39 /note= "Represents Ala, Arg, Asp, Gly, Lys, Ser,
40 or Thr"

RAW SEQUENCE LISTING DATE: 09/13/2002
 PATENT APPLICATION: US/08/823,980E TIME: 13:11:37

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43      (ix) FEATURE:
44          (A) NAME/KEY: Xaa
45          (B) LOCATION: 2
46          (D) OTHER INFORMATION: /label= variable
47 /note= "Represents Ile, Leu, Met, Phe or Trp"
48      (ix) FEATURE:
49          (A) NAME/KEY: Xaa
50          (B) LOCATION: 3
51          (D) OTHER INFORMATION: /label= variable
52 /note= "Represents Leu or Phe"
53      (ix) FEATURE:
54          (A) NAME/KEY: Xaa
55          (B) LOCATION: 6
56          (D) OTHER INFORMATION: /label= variable
57 /note= "Represents Ala or Gly"
58      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
W-->59          Xaa Xaa Xaa Xaa Xaa Xaa
60          1           5
62 (2) INFORMATION FOR SEQ ID NO: 2:
63      (i) SEQUENCE CHARACTERISTICS:
64          (A) LENGTH: 32 amino acids
65          (B) TYPE: amino acid
66          (C) STRANDEDNESS: single
67          (D) TOPOLOGY: linear
68      (ii) MOLECULE TYPE: peptide
69      (ix) FEATURE:
70          (A) NAME/KEY: Xaa
71          (B) LOCATION: 1
72          (D) OTHER INFORMATION: /label= Dpr
73 /note= 2,3-diaminopropionic is acetyl cysteine
74      (ix) FEATURE:
75          (A) NAME/KEY: Xaa
76          (B) LOCATION: 2
77          (D) OTHER INFORMATION: /label= Ahe
78 /note= 2-amino heptanoic is butyl alanine
79      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
W-->80          Xaa Xaa Glu Thr His Val Thr Gly Gly Ser Ala Gly His Thr Val Ser
81          1           5           10          15
82          Gly Phe Val Ser Leu Leu Ala Pro Gly Ala Lys Gln Asn Val Gln Leu
83          20          25          30
85 (2) INFORMATION FOR SEQ ID NO: 3:
86      (i) SEQUENCE CHARACTERISTICS:
87          (A) LENGTH: 5 amino acids
88          (B) TYPE: amino acid
89          (C) STRANDEDNESS: single
90          (D) TOPOLOGY: linear
91      (ii) MOLECULE TYPE: peptide
92      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
93          Val Ser Leu Leu Ala

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RAW SEQUENCE LISTING
 PATENT APPLICATION: US/08/823,980E

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 Output Set: N:\CRF4\09132002\H823980E.raw

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94           1           5
96 (2) INFORMATION FOR SEQ ID NO: 4:
97   (i) SEQUENCE CHARACTERISTICS:
98     (A) LENGTH: 7 amino acids
99     (B) TYPE: amino acid
100    (C) STRANDEDNESS: single
101    (D) TOPOLOGY: linear
102  (ii) MOLECULE TYPE: peptide
103  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
104    Ser Leu Leu Ala Pro Gly Ala
105           1           5
107 (2) INFORMATION FOR SEQ ID NO: 5:
108   (i) SEQUENCE CHARACTERISTICS:
109     (A) LENGTH: 5 amino acids
110     (B) TYPE: amino acid
111     (C) STRANDEDNESS: single
112     (D) TOPOLOGY: linear
113  (ii) MOLECULE TYPE: peptide
114  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
115    Leu Ala Pro Gly Ala
116           1           5
118 (2) INFORMATION FOR SEQ ID NO: 6:
119   (i) SEQUENCE CHARACTERISTICS:
120     (A) LENGTH: 7 amino acids
121     (B) TYPE: amino acid
122     (C) STRANDEDNESS: single
123     (D) TOPOLOGY: linear
124  (ii) MOLECULE TYPE: peptide
125  (ix) FEATURE:
126    (A) NAME/KEY: Xaa
127    (B) LOCATION: 7
128    (D) OTHER INFORMATION: /label= variable
129 /note= "Represents Ala, Pro or Ser"
130  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
W-->131    Ser Leu Leu Xaa Xaa Gly Xaa
132           1           5
134 (2) INFORMATION FOR SEQ ID NO: 7:
135   (i) SEQUENCE CHARACTERISTICS:
136     (A) LENGTH: 7 amino acids
137     (B) TYPE: amino acid
138     (C) STRANDEDNESS: single
139     (D) TOPOLOGY: linear
140  (ii) MOLECULE TYPE: peptide
141  (ix) FEATURE:
142    (A) NAME/KEY: Xaa
143    (B) LOCATION: 7
144    (D) OTHER INFORMATION: /label= variable
145 /note= "Represents Ala, Pro or Ser"
146  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

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RAW SEQUENCE LISTING DATE: 09/13/2002
PATENT APPLICATION: US/08/823,980E TIME: 13:11:37

Input Set : N:\Crf4\09112002\H823980E.DC.txt
Output Set: N:\CRF4\09132002\H823980E.raw

W--> 147 Ser Leu Phe Xaa Xaa Gly Xaa
148 1 5
150 (2) INFORMATION FOR SEQ ID NO: 8:
151 (i) SEQUENCE CHARACTERISTICS:
152 (A) LENGTH: 31 amino acids
153 (B) TYPE: amino acid
154 (C) STRANDEDNESS: single
155 (D) TOPOLOGY: linear
156 (ii) MOLECULE TYPE: peptide
157 (ix) FEATURE:
158 (A) NAME/KEY: Xaa
159 (B) LOCATION: 1
160 (D) OTHER INFORMATION: /label= variable
161 /note= "Represents Any Amino Acid"
162 (ix) FEATURE:
163 (A) NAME/KEY: Xaa
164 (B) LOCATION: 3
165 (D) OTHER INFORMATION: /label= variable
166 /note= "Represents Any Amino Acid"
167 (ix) FEATURE:
168 (A) NAME/KEY: Xaa
169 (B) LOCATION: 8
170 (D) OTHER INFORMATION: /label= variable
171 /note= "Represents Any Amino Acid"
172 (ix) FEATURE:
173 (A) NAME/KEY: Xaa
174 (B) LOCATION: 14
175 (D) OTHER INFORMATION: /label= variable
176 /note= "Represents Any Amino Acid"
177 (ix) FEATURE:
178 (A) NAME/KEY: Xaa
179 (B) LOCATION: 16
180 (D) OTHER INFORMATION: /label= variable
181 /note= "Represents Any Amino Acid"
182 (ix) FEATURE:
183 (A) NAME/KEY: Xaa
184 (B) LOCATION: 17
185 (D) OTHER INFORMATION: /label= variable
186 /note= "Represents Any Amino Acid"
187 (ix) FEATURE:
188 (A) NAME/KEY: Xaa
189 (B) LOCATION: 21
190 (D) OTHER INFORMATION: /label= variable
191 /note= "Represents Any Amino Acid"
192 (ix) FEATURE:
193 (A) NAME/KEY: Xaa
194 (B) LOCATION: 22
195 (D) OTHER INFORMATION: /label= variable
196 /note= "Represents Any Amino Acid"

RAW SEQUENCE LISTING
PATENT APPLICATION: US/08/823,980E

DATE: 09/13/2002
TIME: 13:11:37

Input Set : N:\Crf4\09112002\H823980E.DC.txt
Output Set: N:\CRF4\09132002\H823980E.raw

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197      (ix) FEATURE:
198          (A) NAME/KEY: Xaa
199          (B) LOCATION: 24
200          (D) OTHER INFORMATION: /label= variable
201 /note= "Represents Any Amino Acid"
202      (ix) FEATURE:
203          (A) NAME/KEY: Xaa
204          (B) LOCATION: 27
205          (D) OTHER INFORMATION: /label= variable
206 /note= "Represents Any Amino Acid"
207      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
W--> 208          Xaa Thr Xaa Val Thr Gly Gly Xaa Ala Ala Arg Thr Thr Xaa Gly Xaa
209          1           5           10          15
W--> 210          Xaa Ser Leu Phe Xaa Xaa Gly Xaa Ser Gln Xaa Ile Gln Leu Ile
211          20          25          30
213 (2) INFORMATION FOR SEQ ID NO: 9:
214      (i) SEQUENCE CHARACTERISTICS:
215          (A) LENGTH: 31 amino acids
216          (B) TYPE: amino acid
217          (C) STRANDEDNESS: single
218          (D) TOPOLOGY: linear
219      (ii) MOLECULE TYPE: peptide
220      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
221          Ala Thr Tyr Ala Thr Gly Ala Ala Gln Gly His Ala Thr Asn Ser Phe
222          1           5           10          15
223          Val Ser Leu Phe Arg Ser Gly Ala Ser Gln Asn Leu Lys Leu Val
224          20          25          30
226 (2) INFORMATION FOR SEQ ID NO: 10:
227      (i) SEQUENCE CHARACTERISTICS:
228          (A) LENGTH: 31 amino acids
229          (B) TYPE: amino acid
230          (C) STRANDEDNESS: single
231          (D) TOPOLOGY: linear
232      (ii) MOLECULE TYPE: peptide
233      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
234          Ser Thr Gln Val Thr Gly Gly Gln Ala Ala His Thr Val Arg Gly Val
235          1           5           10          15
236          Ala Ser Ile Phe Ser Pro Gly Ser Arg Gln Asp Ile Ser Leu Ile
237          20          25          30
239 (2) INFORMATION FOR SEQ ID NO: 11:
240      (i) SEQUENCE CHARACTERISTICS:
241          (A) LENGTH: 31 amino acids
242          (B) TYPE: amino acid
243          (C) STRANDEDNESS: single
244          (D) TOPOLOGY: linear
245      (ii) MOLECULE TYPE: peptide
246      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
247          Ser Thr Arg Val Thr Gly Gly Gln Gln Gly Arg Ala Val His Gly Ile
248          1           5           10          15

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/13/2002
PATENT APPLICATION: US/08/823,980E TIME: 13:11:38

Input Set : N:\Crf4\09112002\H823980E.DC.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos.1,2,3,4,5,6
Seq#:2; Xaa Pos.1,2
Seq#:6; Xaa Pos.4,5,7
Seq#:7; Xaa Pos.4,5,7
Seq#:8; Xaa Pos.1,3,8,14,16,17,21,22,24,27
Seq#:133; Xaa Pos.1
Seq#:134; Xaa Pos.4,5
Seq#:135; Xaa Pos.1,3,8,14,16,17,21,22,24,27

VERIFICATION SUMMARY

PATENT APPLICATION: US/08/823,980E

DATE: 09/13/2002

TIME: 13:11:38

Input Set : N:\Crf4\09112002\H823980E.DC.txt
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L:20 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:21 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:80 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:208 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:16
L:1838 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133 after pos.:0
L:1851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:134 after pos.:0
L:1919 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:135 after pos.:0
L:1921 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:135 after pos.:16